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MAR WAR TO SO	First Named Inventor	David BONNAFFE
Usine Submitted: March 2, 2005	Group Art Unit	Not Yet Assigned
as many sheets as necessary)	Examiner Name	Not Yet Assigned
Sheet 1 of 5	Attorney Docket Number	355901-0104

U.S. PATENT DOCUMENTS						
		U.S. Patent	Document	N. (Data day of Applicant of	Date of Publication of	Pages, Columns, Lines, Where Relevant
Examiner Initials*	Cite No. ¹	Number	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear
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Examiner initials*	Cite No.1	Foreign Patent Document Office ³ Number ⁴ Kind Code ³ (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
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GK	C1	Lortat-Jacob et al. "Interferon-Gamma Binds to Heparan Sulfate by a Cluster of Amino Acids Located in the C-terminal Part of the Molecule" FEBS LETTERS 280(1):152-154 (1991)	
	C2	Lortat-Jacob et al. "Non-receptor-Mediated Tissue Localization of Human Interferon-Gamma. Role of Heparan Sulfate/Heparin-Like Molecules" Cytokine 8(7):557-566 (1996)	
1	СЗ	Billiau, Alfons "Interferon-Gamma: Biology and Role in Pathogenesis" Advances in Immunol. 62:61-130 (1996)	
OK	C4	Boutin et al. "Intrapleural Treatment with Recombinant Gamma-Interferon in Early Stage Malignant Pleural Mesothelioma" Cancer 74:2460-2467 (1994)	

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		Escudier et al. "Combination of Interleukin-2 and Gamma Interferon in Metastatic renal Cell Carcinoma" Eur. J. Cancer 29A(5):724-728 (1993)	
	C6	Jett et al. "Phase III Trial of Recombinant Interferon Gamma in Complete Responders with Small-Cell Lung Cancer" J. Clin. Oncol. 12(11):2321-2326 (1994)	
	C7	Gallin, et al. "A Controlled Trial of Interferon Gamma to Prevent Infection in Chronic Granulomatous Disease" New Engl. J. Med. 324(8) 509-516 (1991)	
	C8	Cannon et al. "Prospective 5-Year Followup of Recombinant Interferon-Gamma in Rheumatoid Arthritis" J. Rheumatol 20:1867-1873 (1993)	
	C9	Czarniecki et al. "Interferon-Gamma and Resistance to Bacterial Infections" APMIS 101:1-17 (1993)	
		Миггау et al. "Interferon-Gamma and Host Antimicrobial Defense: Current and Future Clinical Applications" <i>Am. J. Med.</i> 97:459-467 (1994)	
	C11	Kakumu et al. "Treatment with Human Gamma Interferon of Chronic Hepatitis B: Comparative Study with Alpha Interferon" J. Med. Virol. 35:32-37 (1991)	
	C12	Freundlich et al. "Treatment of Systemic Sclerosis with Recombinant Interferon-Gamma" Arthritis Rheum. 35(10):1134-1142 (1992)	
	C13	Todd et al. "Interferon Gamma-1b" <i>Drugs</i> 43(1):111-122 (1992)	
	C14	Froyen et al. "Potential Therapeutic Use of Antibodies Directed Towards HulFN-Gamma" <i>Biotherapy</i> 10:49-57 (1997)	
	C15	Ozmen et al. "Soluble Interferon-Gamma Receptor: A Therapeutically Useful Drug for Systemic Lupus Erythematosus" J. of Interferon Res. 14:283-284 (1994)	
	C16	Ozmen et al. "Experimental Therapy of Systemic Lupus Erythematosus: The Treatment of NZB/W Mice with Mouse Soluble Interferon-Gamma Receptor Inhibits the Onset of Glomerulonephritis" Eur. J. Immunol 25:6-12 (1995)	
	C17	Lortat-Jacob et al. "High-Affinity Binding of Interferon-Gamma to a basement Membrane Complex (Matrigel) J. Clin. Invest. 87:878-883 (1991)	
	C18	Lortat-Jacob et al. "Interferon-Gamma C-Terminal Function: New Working Hypothesis. Heparan Sulfate and Heparin, New Targets for IFN-Gamma, Protect, Relax The Cytokine and Regulate Its Activity" Cell. Mol. Biol. 37(3):253-260 (1991)	
GK	C19	Lortat-Jacob et al. "Heparin Decreases the Blood Clearance of Interferon-Gamma and Increases its Activity by Limiting the Processing of its Carboxyl-terminal Sequence" J. of Biol. Chem. 271(27):16139-16143 (1996)	

Examiner Signature S. Kazin	Date Considered	9/11/07
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			Group Art Unit	Not Yet Assigned	
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		NON PATENT LITERATURE DOCUMENTS	-
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CC C20		Halme et al. "Inhaled Recombinant Interferon Gamma in Patients with Lung Cancer: Pharmacokinetics and Effects on Chemiluminescence Responses of Alveolar Macrophages and Peripheral Blood Neutrophils and Monocytes" Int. J. Radiat. Oncol. Biol. Phys. 31(1):93-101 (1995)	
	C21	Lack et al. "Nebulized INFN-Gamma Inhibits the Development of Secondary Allergic Responses in Mice" J. Immunol. 157:1432-1439 (1996)	
	C22	Short et al. "Percutaneous Absorption of Biologically-Active Interferon-gamma in a Human Skin Graft-Nude Mouse Model" <i>Pharm. Res.</i> 13(7):1020-1027 (1996)	
	C23	Lortat-Jacob et al. "Molecular Organization of the Interferon Gamma-Binding Domain in Heparan Sulphate" <i>Biochem. J.</i> 310:497-505 (1995)	
	C24	Lee, et al. "Synthesis of 3-(2-Aminoethylthio)Propyl Glycosides" Carbohydrate Res. 37:193-201 (1974)	
	C25	Schmidt et al. "New Methods for the Synthesis of Glycosides and Oligosaccharides – Are There Alternatives to the Koenigs-Knorr Method?" Agnew Chem. Int. Ed. Engl. 25:212-235 (1986)	
	C26	Klotz et al. "Anomeric O-Alkylation of O-Unprotected Hexoses and Pentoses - Convenient Synthesis of Decyl, Benzyl, and Allyl Glycosides" <i>Liebigs. Ann. Chem.</i> 683-690 (1993)	
	C27	Klotz et al. "Anomeric O-Alkylation of O-Acetyl-Protected Sugars" J. Carbohydrate Chemistry 13(8):1093-1101 (1994)	
	C28	Terjung et al. "New 2/2-Type Surfactants Via Anomeric O-Alkylation of Mannofuranose" Carbohydr. Res. 297:229-242 (1997)	
	C29	Lubineau et al. "Syntheses of α-Linked Derivatives of <i>N</i> -Acetyl Glucosamine and Gal-β(1-3)GalNAc (T Antigen) Directly with the Natural <i>N</i> -Acetyl Protecting Group" <i>J.Chem. Soc. Chem. Commun.</i> 1918-1919 (1989)	
	C30	Lubineau et al. "Stereoselectivity Control in Anomeric O-Alkylation. Application to the Synthesis of C ₂ Symmetric Glycoconjugates" <i>Tetrahedron Letters</i> 38(23):4087-4090 (1997)	
	C31	Sakairi et al. "Synthesis of a Conformationally Constrained Heparin-Like Pentasaccharide" Chem. Eur. J. 2(8):1007-1013 (1996)	
	C32	Petitou et al. "A Synthetic Heparin/Heparan Sulfate-Like Decasaccharide Releases Lipase Activity In Vivo. Chemical Synthesis and Biological Activity" Bioorg. Med. Chem. Lett. 7(15):2067-2070 (1997)	
1	C33	Petitou et al. "First Synthetic Carbohydrates with the Full Anticoagulant Properties of Heparin" Agnew. Chem. Int. Ed. 37(21):3009-3014	
SŁ	C34	Lei et al. "Synthesis of a 3-Deoxy-L-Iduronic Acid Congtaining Heparin Pentasaccharide to Probe the Conformation of the Antithrombin III Binding Sequence" Boorgan. & Med. Chem. 6:1337-1346 (1998)	

Examiner Signature	Gikazista	Date Considered	9/11/07

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NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	i i i i i i i i i i i i i i i i i i i		number(s), T°	
GK				
	C36	Duchaussoy et al. "Identification of a Hexasaccharide Sequence Able to Inhibit Thrombin and Suitable for 'Polymerisation'" Carbo. Res. 317:63-84 (1999)		
	C37	Duchaussoy et al. "Assessment Through Chemical Synthesis of the Size of the Heparin Sequence Involved in Thrombin Inhibition" Carbo. Res. 317:85-99 (1999)		
	C38	Koshida et al. "Synthesis of Heparin Partial Structures and their Binding Activities to Plateletes" <i>Bioor. Med. Chem. Lett.</i> 9:3127-3132 (1999)		
	C39	Kovensky et al. "A Synthetic Heparin Sulfate Pentasaccharide, Exclusively Containing L-Iduronic Acid, Displays Higher Affinity for FGF-2 than its D-Glucuronic Acid-Containing Isomers" <i>Bioor. & Med. Chem.</i> 7:1567-1580 (1999)		
	C40	La Ferla et al. "Synthesis of Disaccharide Sub-Units of a New Series of Heparin Related Oligosaccharides" <i>Tetrahedron</i> 55:9867-9880 (1999)		
	C41	Lubineau et al. "New Accesses to L-Iduronyl Synthons" Tetahedron Lett. 41:307-311 (2000)		
	C42	Macher et al. "Synthesis of L-Idofuranurono-6,3-Lactone and Its Derivatives via Hexodialdodifuranoses" Carbo. Res. 80:45-51 (1980)		
	C43	Jacquinet et al. "Synthesis of Heparin Fragments. A Chemical Synthesis of the Trisaccharide ο-(2-Deoxy-2-Sulfamido-3,6-Di-O-Sulfo-α-D-Glucopyranosyl), etc." Carbo. Res. 130:221-241 (1984)		
	C44	Baggett et al. "Re-examination of the acid hydrolysis of 5,6-Anhydro-1,2-O-Isopropylidene-β-L-Idofuranose" Carbo. Res. 127:149-153 (1984)		
	C45	Medakovic et al. "An Efficient Synthesis of Methyl 1,2,3,4-tetra-O-acetyl-β-L-Idopyranuronate" Carbo. Res. 253:299-300 (1994)		
	C46	Dromowicz et al. "A Convenient Synthesis of D-Idose" Carbo. Res. 308:169-171 (1998)		
	C47	Hinou et al. "Novel Synthesis of L-Iduronic Acid Using Trehalose as the Disaccharidic Starting Material" Tetrahedron Lett. 40:1501-1504 (1999)		
	C48	Adinolfi et al. "Intramolecular Tishchenko Reactions of Protected Hexos-5-Uloses: a Novel and Efficient Synthesis of L-Idose and L-Altrose" Synlett 3:336-338 (1999)		
CK	C49	Ojeda et al. "A New Route to L-Iduronate Building-blocks for the Synthesis of Heparin-like Oligosaccharides" Synlett 8:1316-1318 (1999)		

Examiner Signature	G. Karislan	Date Considered	9/11/07

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		NON PATENT LITERATURE DOCUMENTS		
Examiner Cite No.1				
SK	C50	Takahashi et al. "A Novel and Practical Synthesis of L-Hexoses from D-Glycono-1,5-Lactones" J. Am. Chem. Soc. 122:2995-3000 (2000)		
	C51	Horton et al. "Ethynylation of 1,2-O-Isopropylidene-α-D-xylo-Pentadialdose derivatives. A Synthetic Route to Uronic Acids" Carbo. Res. 14:159-171 (1970)		
	C52	Danishefsky et al. "On the Communication of Chirality from Furanose and Pyranose Rings to Monosaccharide Side Chains: Anomalous Results in the Glucose Series" <i>Tetrahedron</i> 42(11):2809-2819 (1986)		
	C53	Vasella et al. "194. Convenient Synthesis of 2-Azido-2-deoxy-aldoses by Diazo Transfer" Helvetica Chemica Acta. 74:2073-2077 (1991)		
	C54	Alper et al. "Metal Catalyzed Diazo transfer for the Synthesis of Azides from Amines" <i>Tetrahedron Lett.</i> 37(34):6029-6032 (1996)		
	C55	Tabeur et al. "Oligosaccharides Corresponding to the Regular Sequence of Heparin: Chemical Synthesis and Interaction with FGF-1" <i>Bioorg. & Medic. Chem.</i> 7:2003-2012 (1999)		
	C56	Oltvoort et al. "Use of the Cationic Iridium Complex 1,5-Cyclooctadiene-bis[methyldiphenylphosphine]-iridium Hexafluorophosphate in Carbohydrate Chemistry: Smooth Isomerication of Allyl Ethers to 1-Propenyl Esters" Synethsis 305-308 (1981)		
ζ	C57	Dianzani F. "Interferon Treatments: How to Use an Endogenous System as a Therapeutic Agent" J. of Interferon Res. Special Issue May 1992, pp 109-118		
GC	C58	Horton et al. "Preparation of Derivatives of L-Idose and L-Iduronic Acid from 1,2-O-Isopropylidene-α-D-Glucofuranose by Way of Acetylnic Intermediates" <i>Carbo. Res.</i> 58:89-108 (1977)		

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